



# **Hunters Point Naval Shipyard Asphalt Waste Disposal at Keller Canyon**

**Hunters Point Shipyard**

**BCT**

**April 2, 2015**

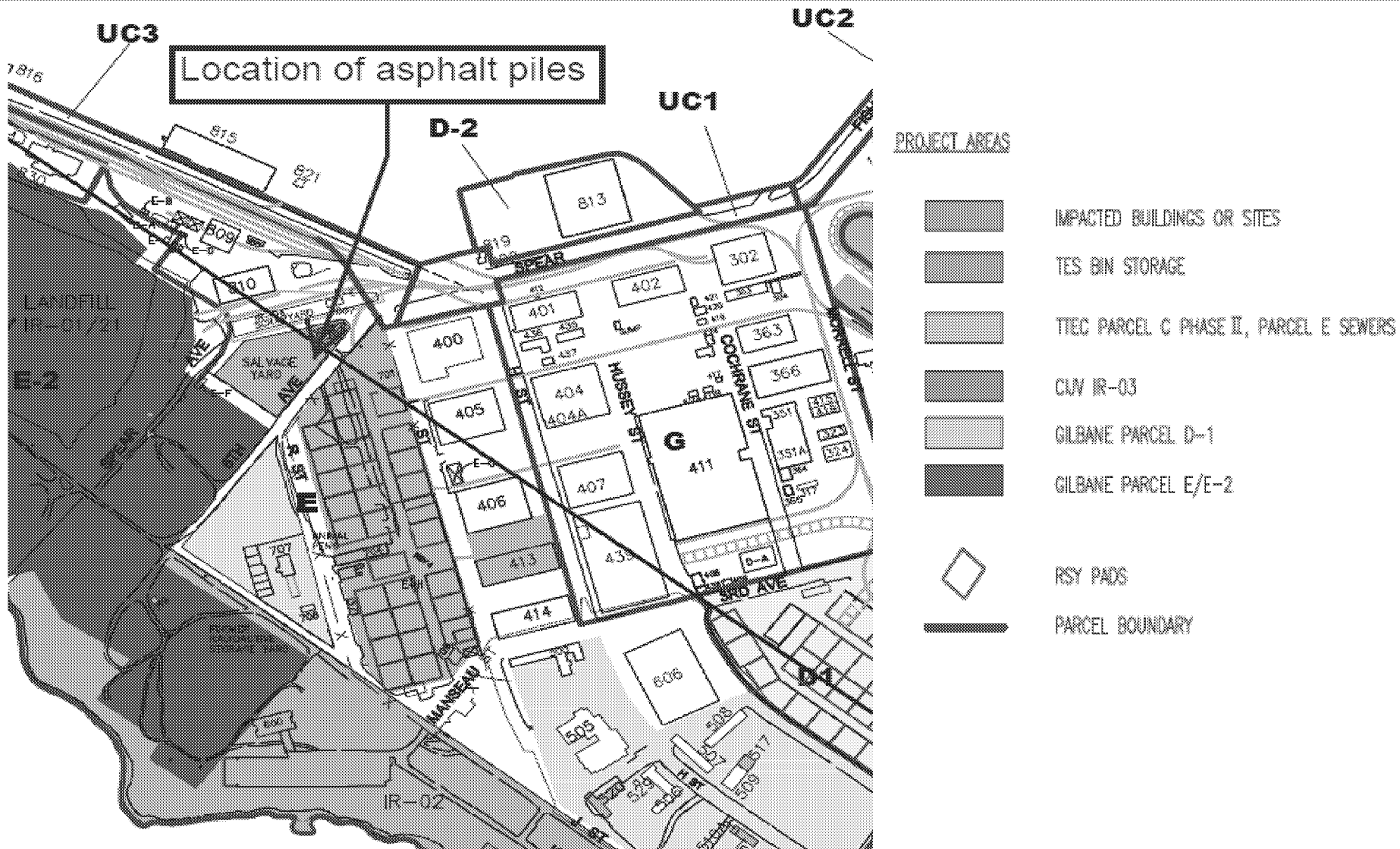
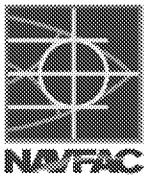
# Timeline and Summary of Events



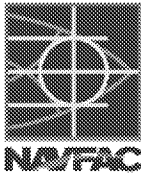
**February 13, 2015:** The Navy's basewide transportation and disposal (T&D) contractor loaded nine trucks of asphalt (218 tons) that had not been radiological cleared from a HPNS radiologically controlled area (RCA) and transported and disposed of the material at Keller Canyon landfill.

**Asphalt Origin:** From the radiological removal action at the 707 Triangle Area and 500 Series Area. Asphalt was removed and stockpiled in order to investigate and remediate the soil beneath. Soil beneath contained cesium-137 (Cs-137) and radium-226 (Ra-226) above the HPNS radiological release criteria.

# Asphalt Stockpile Location – Salvage Yard



# Immediate Corrective Actions

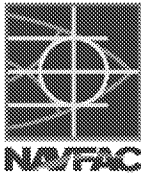


- The Navy contractor made same day notification to the landfill and isolated the material through the placement of fencing, signage, and other BMPs around the material.
- Navy put an immediate stop to all loading, hauling, and disposal of material from within RCAs an impacted areas across HPNS. (Note: This stop work is still in affect until all corrective actions are implemented).
- Navy mandated that all trucks hauling the material be returned to HPNS for radiological screening and clearance.
- Navy directed basewide T&D contractor to recover and return material to HPNS for proper screening.
- Navy assembled an internal team to determine a root-cause. On February 25, 2015 the Navy team conducted a site reconnaissance and spoke with key personnel involved in the incident.

# Keller Canyon Corrective Actions



# Timeline and Summary of Events



**February 17, 2015:** The Navy's RASO notified and engaged with the California Department of Public Health, Radiological Health Branch (CDPH-RHB).

**February 19-23, 2015:** Navy representatives, Navy contractors, and CDPH-RHB coordinated to safely retrieve the material from the landfill and return it to HPNS for proper screening. Radiological monitoring was conducted during all loading activities.

**February 23, 2015:** Footprint at landfill was surveyed and released by CDPH-RHB.

# Timeline and Summary of Events



**February 24 - March 4, 2015:** Asphalt was transported back to HPNS in sealed bins. A total of 39 bins were returned to HPNS.

–Asphalt was commingled with other non-radiologically impacted soil and debris from HPNS upon arrival at landfill (102 tons of soil and 218 tons of asphalt)

**March 20, 2015:** All bins had been emptied and pressure washed. Began process of surveying and swiping bins for free-release.

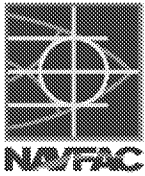
**As of April 2, 2015:** 13 bins (not the soil within) have been released by RASO.

## Picture of Bins Returned to HPNS



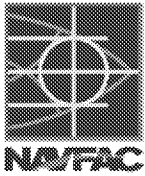


## Preliminary Results



- **Keller Canyon Landfill:** No radiological screening levels were exceeded during any of the loading activities at the landfill.
  - Navy and CDPH collected 12 soil samples and conducted gamma walkover/static count surveys. Cs-137 and Ra-226 results below release criteria.
  - Final clearance survey conducted by CDPH and Navy = no residual contamination. Landfill footprint was released by CDPH on February 23, 2015.
  
- Trucks hauling asphalt passed through both the HPNS portal monitor and the Keller Canyon portal monitor and neither alarm was triggered.

## Remaining Tasks



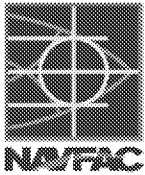
- Survey and release of remaining bins expected by mid-May 2015.
- Navy RASO approval of work instruction to radiologically survey and release the waste material expected by April 3, 2015.
- Begin radiological screening and sampling of waste material RSY pads the week of April 6<sup>th</sup>.
- The Navy expects to have all screening results available for the BCT by early June 2015.

- **Primary root cause:** a lack of understanding amongst the basewide radiological contractor of their responsibility to maintain control of material within RCAs under their license.
- **Secondary contributing factor:** a lack of understanding amongst basewide T&D contractor, basewide radiological contractor, and the Navy PM of roles and responsibilities for determining LLRW waste status and procedures for off-haul.

### Planned Corrective Actions:

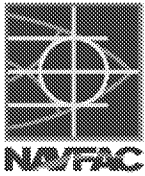
- Formalize standard operating procedure which includes restrictions on removing waste within a RCA by the basewide (non-radiological) T&D contractor. In addition, the Basewide T&D contractor will be required to obtain *written confirmation* from Navy RASO that any piles originating from a radiologically impacted area were cleared for removal as non-LLRW.

## Corrective Actions Continued



- The Navy will require that all contractors conducting radiological work at HPNS develop a tracking table of waste piles within their respective RCAs and/or impacted areas. The table shall provide (at a minimum) a waste pile identifier, a date of generation, and the status/date of radiological clearance [i.e., pending, cleared, or contaminated (i.e. LLRW)]. Field marking/labeling of radiological status shall be provided for each waste pile. This table shall be provided to the basewide radiological contractor for regular field verification.
- Navy RPM to provide the tracking table to the non-radiological basewide transportation and disposal (T&D) contractor for cross-referencing with the non-radiological waste pile inventory to ensure ownership and responsibility are clearly identified.

## Corrective Actions Continued



- The basewide radiological contractor to conduct refresher training on their SOPs related to the control of radioactive material and management/control of RCAs. Contractors shall also ensure their general radiological awareness training to personnel coming on site includes information on the roles and responsibilities under their radiological license(s).